

**Tomas Navarro**  
**Holography**

Using strictly the knowledge achieved during my past researches in LBDM I propose to materialize those skills in new self-built screening devices: holography.

The project is research based; both theory and praxis will be executed through an standard investigation methodology: design, test and analysis. Consequently the devices and outputs will be driven by the process.

*The specific content (holograms) should be secondary as research methodology testers, although my will is to inscribe those "objects" in the same way the conceptual-art artists did with the photographic medium, that means use the medium as art-object itself, being consequently the object of art meaningful through the simply and visually materialization of the phenomenologic aspects of the photography itself.*

Through an analog and home-made approach I'll investigate the materialization of 3d model projection in space, **avoiding any surface of projection**. The hologram I want to achieve is not involving mirrors or lenticular surfaces but a high-density air medium, which means strictly smoke-saturated air. Due to my proposal is a research project about optical screening technology, which is not specifically developed yet, I'd like to sum up here just the two first approaches I want to work on as analog laboratory research.

I'd like to clarify that my skills and possibilities excludes, at last in the first approach, to work on high-tech performances so the devices I'll investigate are **low-tech analog based**, working with the materials I can achieve easily. Furthermore is my will to aim to the theoretical and parallel develop of a much more complex machine as research's final goal.

The first step: conceptual and pragmatism investigation of a true holographic projection without projection surface, is based on two lines of investigation:

**1. Lens-based holography.**

*Basically the idea is to work with a grid of concentrated-light pixels in which each pixel, further than depict colors and luminance also describes the depth relative of those pixels onto space (z axis).*

**2. Variable ray-light length.**

*Basically the idea is to achieve the illusion of variable length in a continuous ray of light in a high density air medium, involving high-rate flickering and strobe-light.*

My goal for LBDM is to set up a genuine and new approach to cinematography, involving a bunch of tools and achievements I collected through theoretical investigation and application in moving images. Consequently I aimed my last lectures in new technological development in perception of moving images and new languages of visual data processing. I combined those texts with the study of the achievements of north american conceptual artists during the sixties, specifically the relationship with photography of the Land Art artists.



Finally I questioned myself what is the real meaning of the tools I'm using for new languages in moving images? Could those tools be a stand-alone artwork by themselves? Could be a geometry-tracked live action/virtual set be meaningful by itself? Well, I'm pretty sure that all these new tools define the 21<sup>st</sup> century collective imaginary and we're used now to time/space distortion as part of our common language (Bullet time, tracking technologies, freeze-time) so the question is: what's the next step in contemporary cinematographic languages? Dennis Oppenheim early artworks gave to me the answer for my research's next step, which is the conceptualization of the medium in which the artwork is executed.

Holography is the logical consecution of my previous researches in visual machinery and hopefully the touchstone for all the knowledge I achieved due to is strictly based on conceptualization of virtual geometries (space scanning/tracking) and light/lenses (pure photography).

Related to previous practices I should explain also that working with Sebastin Cimpan in our last commissioned video work we were exploring the **depth mask** postproduction technique from which the idea of the hologram came to me. Basically a depth mask is a secondary layer of an image that is used as 3d mapping system to tell the machine which pixel is closed to the camera or which one is far from it in order to make the illusion of volume and also simulate extremely narrow dof.

To sum up: the idea is to add a 3d data layer in order to allow the screening to depict the Z axis (depth) in a non-flat medium. The initial plan is to sketch up the devices I want to experience with, previously written down on this proposal, and build analog

DIY testers in order to analyze the feedbacks and then keep developing a more complex device if the experience are satisfactory or move to new ideas if those feedbacks are not suitable for the goals I want to achieve.

I'd like to affirm, similarly to previous proposals and being aware of the primary importance of the research process, that incoming ideas or achieves could modify this document and the methodology and goals I'm writing here as my will is to plenty let myself flow with the process, being allowed to do and undo always based on the methodology of design-test-analysis.

Finally I should clarify the impossibility to establish a coherent budget as I'm working strictly based on theoretical approach to the project. I'll do it as soon as I have specific ideas for my first testers aswell a list of research material I'll need for continue my lectures.

From where the idea come from: depth mask (previous practices), particles, Paul Virilio, dennis oppenheim.